



AMENDED CLAIMS

45. A computer system for contracting collagen fibers in a selected site of collagen containing tissue which is adjacent to a fluid medium, comprising:

an energy delivery device including a proximal portion and a coaxial distal portion with a blunt periphery guidable and positionable in contact with a surface of the selected site without penetrating the surface of the selected site and configured to provide a selected thermal distribution in the selected site and effect a controllable contraction of at least a portion of the selected site of the collagen containing tissue, the coaxial with the proximal portion;

a sensor positioned in an interior of the distal portion of the energy delivery device to detect a thermal energy from the selected site and from the fluid medium, the sensor producing a thermal feedback signal which represents a composite of the thermal energy detected from the selected site of a collagen containing tissue and from the fluid medium; and

6 a feedback control system that includes a programmable microprocessor having a controlled collagen contraction program, where the programmable processor is coupled to the energy delivery device and the sensor, wherein a position of the sensor, and a geometry of the distal portion of the energy delivery device are received as input to the controlled collagen contraction program to direct the programmable microprocessor in the feedback control system to provide controllable energy delivery to the selected site of the collagen containing tissue.

46. A computer system for contracting collagen fibers in a selected site of a collagen containing tissue which is adjacent to a fluid medium, comprising:

an energy delivering device including a proximal portion and a coaxial distal portion configured to be guided and positioned at an interface between the fluid medium and the selected site, and to provide a selected thermal distribution in the selected site that effects a controllable contraction of at least a portion of the selected site of the collagen containing tissue, the coaxial distal portion coaxial with the proximal portion;

a sensor positioned in an interior of the distal portion of the energy delivery device to detect a thermal energy from the selected site and from the fluid medium, the sensor producing a thermal feedback signal which represents a composite of the thermal energy detected from the selected site of a collagen containing tissue and from the fluid medium; and

a feedback control system that includes a programmable microprocessor having a controlled collagen contraction program, wherein the programmable processor is coupled to the sensor, wherein a position of the sensor, and a geometry of the distal portion of the energy delivery device are received as input to the controlled collagen contraction program to direct the programmable microprocessor in the feedback control system to provide controllable energy delivery to the selected site of the collagen containing tissue.

47. A computer system for contracting collagen fibers at a selected site of collagen containing tissue that is adjacent to a fluid medium, comprising:

61. an energy delivery device formed with a distal portion with blunt periphery guidable for contact with a surface of the selected site without penetrating the surface of the selected site, and configured to deliver a predetermined level of energy to the selected site without penetrating the surface of the selected site, to effect a contraction in at least a portion of the selected site of the collagen containing tissue;

a sensor positioned at the distal portion of the energy delivery device to detect thermal energy from the selected site and from the fluid medium, the sensor producing a thermal feedback signal which represents a composite of the thermal energy detected from the selected site of a collagen containing tissue and from the fluid medium; and

a feedback control system for providing controllable energy delivery to the selected site that includes a programmable microprocessor with a controlled collagen contraction program, wherein the programmable microprocessor is coupled to the energy delivery device and the sensor to controllably adjust the thermal distribution provided by the energy delivery device based on

~~instructions from the controlled collagen contraction program and the thermal feedback signal from the sensor.~~

Sub 47
48. The apparatus of claim 47, further comprising :
an electrical insulator positioned at least partially around an exterior surface of the energy delivery device; and
a thermal insulator positioned at least partially around an exterior surface of the energy delivery device.

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49. The apparatus of claim 47, further comprising;
a thermally insulating material coupling the sensor to an exterior surface of the distal portion.

Sub 42
50. The apparatus of claim 47, further comprising
a thermally conductive material coupling the sensor to an exterior surface of the distal portion.

51. The apparatus of claim 47, wherein the sensor is a band at least partially positioned on an exterior surface of the distal portion.

52. The apparatus of claim 51, further comprising:

~~a thermal insulator positioned at least partially around an exterior surface of the energy delivery device.~~

53. The apparatus of claim 47, wherein the energy delivery device is an RF energy delivery device coupled to an RF energy source.

54. The apparatus of claim 47, wherein the energy delivery device is a resistive heating element coupled to a resistive heating source.

55. The apparatus of claim 47, wherein the energy delivery device is a microwave probe coupled to a microwave source.